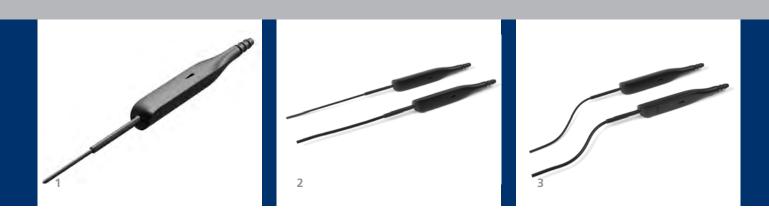


FRAUNHOFER INSTITUTE FOR MACHINE TOOLS AND FORMING TECHNOLOGY IWU



- 1 CAD model of the suction
- Straight initial state
- 3 Patient-specific shape due to manual bending

SURGICAL SHAPE MEMORY ALLOY SUCTION

Fraunhofer Institute for **Machine Tools and Forming Technology IWU**

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IN COOPERATION WITH



GESTALTUNG

europcoating

Functionality

During the surgery, the clinician has the possibility to bend the suction tube manually. Thus he can better reach the anatomical target area. Shape memory alloy is applied for the suction tube.

After a surgical intervention, the suction will be sterilized with the help of an autoclave and transfered simultaneously to the original shape due to the application of heat with at least 212 degrees Fahrenheit. Already a few seconds are sufficient to transfer the thermal shape memory alloy to the straight initial state.

The flexibility of the material allows new options in medical engineering. The ergonomic hand piece of the instrument was developed with surgeons to ensure a fatigue-proof handling.

Customer benefit

This surgical instrument provides following advantages:

- intraoperative adjustment according to the patient-specific anatomy
- manual bending in required shape
- streight original state after autoclaving
- better accessibility of the target region
- minimally invasive surgery
- fatique-free handling due to ergonomic design
- cost saving due to one suction instead of several rigid ones with different shapes